From Casting to Coding: Technologies of sculptural reproduction from antiquity to the present

Elizabeth Johnson, Birkbeck College
Rebecca Wade, Leeds Museums and Galleries

Recent advances in digital 3D technology have opened up new and exciting possibilities for both artists and art historians, from 3D printed artworks to the use of digital photogrammetry to reconstruct ancient monuments. Situated at the cutting-edge of digital culture, these practices also participate in a longer tradition of sculptural reproduction, including casting, paper squeezes and sculpting machines. Critical studies of sculptural reproduction can help to develop our understanding of the ambiguous territory between artwork and commodity, and illuminate networks of exchange between art and manufacture, entertainment and education. Without adequate critical analyses of the histories of sculptural reproduction, we miss a valuable opportunity to consider the intersection between art history and the everyday.
This session explores how different types of three-dimensional reproduction have shaped the ways in which art is produced, encountered, disseminated and conceptualised. It looks to expose the archaeology of sculptural reproduction by considering its different forms from a transhistorical perspective. Through contributions from art historians, conservators, curators and classicists, we examine sculptural reproductions through a range of frameworks: philosophical, museological, social, material, aesthetic and economic.

Speakers and Abstracts

Cited Bodies: Data as Material in Contemporary Art

Jack Smurthwaite (Independent)

This paper explores the materialisation of data through its increased use as artistic material; data is often moulded, authored and sculpted to grant it some form of materiality. This investigation is prompted by the relatively recent realisation in the public consciousness that (personal) data has value and currency, that it can have an impact outside the confines of the human body. Certain data is then often simultaneously personal and alien; it represents the subject but is apparently divorced from the agency of that same subject.

Increasingly in recent years, artists have approached data as a plastic and malleable medium and have used their agency as creators to alter the manifestation of that which was once thought of as distinctly non-physical. The question then stands: if the non-physical can be 'materialised' then is it also sculptural and, if so, what impact does this have on the (expanded) sculptural field?

Andrew Benjamin has said that ‘material can never be just the mere presence of matter’, that something else must be at work within sculpture for it to satisfactorily function within his philosophical framework. This paper engages with Benjamin's Heideggerian project beyond matter but challenges it to consider new and differing forms of materiality in light of recent developments in both the philosophy of art and art-making practices.

The Challenges and Opportunities of Studying Plaster-cast Manufacturing of the 19th Century through Archives and Historical Recipe Books

Valentina Risdonne (Northumbria University/Victoria and Albert Museum)

Making replicas by plaster casting was an extremely successful and remunerative business during the 19th19th century, although the 1798 Garrard’s Act, which aimed to protect plaster-cast makers, did not stop the pirating of casts and moulds. This led to workshop secrecy around the art of casting and plastering. Moreover, the ‘lower status’ of this art, when compared with painting, sculpture and architecture, may have resulted in reduced interest in the preservation of documentation on this topic. Until recently, the underestimation of the role of these replicas in the museums might also have caused the lack of conservation peer-reviewed papers on the treatments applied to these objects. This paper explores how the archival and historical research on the materials and the manufacturing techniques in use during the

19th19th century to produce plaster casts can support the understanding, display and conservation of these objects. Questions such as What are the challenges of this research? What is the material available to support the historical and scientific research? Why is some information virtually unavailable? will be addressed. Through a review of the sources and an evaluation of the initial expectation regarding my research on plaster casts, the paper will describe how a challenging initial search can be turned in a cradle of opportunities.

The Making of Greek and Roman Sculpture and the Idea of the 'Mechanical'
Emma Payne (King's College London)

Through the 19th century, there was a growing tendency to approach Roman marble sculptures purely as a means through which to examine lost Greek bronze works. Roman statues were increasingly dismissed as inferior, unoriginal copies. Such disparagement of Roman marbles took off just as mechanical copying techniques were becoming better known and more widely available. Roman sculptures were often now described as 'mechanical' and this perspective persisted well into the 20th century. For instance, Cornelius Clarkson Vermeule, curator of classical art at the MFA, Boston (1957–96), wrote that many were 'routine, mechanical, and rather dull documents of machine creativity' (*Boston Museum Bulletin*, 1967, Vol. 65, No. 342, p.175). It has, however, since been suggested that the anachronistic application of modern copying techniques was responsible for this ungracious interpretation of Roman sculpture.

In this paper, I explore the development through the 18th to 20th centuries of how classical archaeologists have investigated and understood the making practices of Greek and Roman sculptors, with a particular focus on copying. Their interpretations will be considered in light of the concurrent invention of a range of different 'sculpturing machines', enabling accurate copies of original works to be mass-produced, and including apparatuses such as those designed by Nicolas-Marie Gatteaux, John Bacon, James Watt, and Benjamin Cheverton. I will trace connections between the conclusions drawn by academics and contemporaneous innovations to consider in greater detail the impact of technological change on the scholarship surrounding classical sculpture.

Double Temporality, Double Oblivion. The blurring condition of metal-casting patterns
Javier Fernández Vázquez (Universidad Autónoma de Madrid/Universidad Carlos III de Madrid)

The decline of the Fordist economic model left a legacy of industrial ruins that shape both the urban landscape and visual collective imaginary in former manufacturing towns. These places are still home to a wide range of derelict objects: machines, tools, furniture, etc. Among them, wooden metal-casting patterns, with their enigmatic shapes reminiscent of futurism or constructivism, project a particular kind of enchantment onto artists, curators and antiques market operators.

This paper focuses on the biography of two groups of patterns found in European cities that have undergone a profound and conflictive process of economic and cultural revitalization: Bilbao and Nantes. After years of being left to decay in an industrial ruin, a selection of patterns is rescued and, ultimately, displayed in contemporary art exhibitions. As a result, these pieces become aesthetically pleasing objects and their candidacy to become part of the protected cultural heritage is reinforced. While these artefacts thrive in a Post-Fordist present keen on designed nostalgia, the unselected larger group, however, still inhabit the ruin, the ghostlike past.

Drawing upon reflections by authors such as Georges Didi-Huberman and Alfred Gell, this text argues, firstly, that the aforementioned double temporality in the urban space echoes the function of the patterns as intermediaries between past and future in the moulding process. Secondly, that their ambiguous condition is sharpened by an operation of double forgetting: while some patterns are directly discarded as rubbish, others are aesthetically legitimised after the memory of labour they embody is successfully deactivated.

From Plaster Casts to 3D Models: transforming casts of pre-Columbian art
Jennifer Reynolds-Kaye (Yale Center for British Art)
Claudia Zehrt (British Museum)

The limited scholarship on plaster casts has primarily focused on casts of Greek and Roman sculpture. Few scholars have studied non-Classical casts, despite their importance to the West's understanding of a global cultural history. This paper is a comparative study of two late 19th/early 20th century cast-makers of pre-Columbian monuments, Eufemio Abadiano and Alfred Maudslay. The paper traces the history of their casts from production to dissemination, and, in the case of Maudslay, the legacy of the casts in 3D scans at the British Museum with Google Arts and Culture.

Each cast-maker had a unique personal trajectory that is linked to the afterlives of their objects. Abadiano was a Mexican-born cast-maker who produced casts at the Museo Nacional in Mexico that travelled through World's Fairs and were purchased by the Smithsonian in 1885. Maudslay was a British explorer who made plaster moulds and paper squeezes of Maya stelae and monuments in situ. These were made into facsimiles at the South Kensington Museum (now the V&A) before being transferred to and displayed at the British Museum in the 1920s.

This paper asks questions such as: Under what conditions were the casts produced and how is their origin story manifested in the objects' afterlives? Is the advent of 3D-modelling bringing us closer to or further away from the original monuments? Does the contextualisation of a 3D model using new technologies ('putting objects back into the landscape') help or hinder the encounter with the object?

Neo-PLAssicism: Two Sleeping Shepherds in Three Dimensions
Melissa Gustin (Henry Moore Foundation)

John Gibson's 1818/24 *Sleeping Shepherd* responded to immediately contemporary works of sculpture from European masters, as well as ancient sculptural prototypes in Rome. It also suggested a timeless Arcadian setting, showing a nude youth with antique accoutrements. The version in the Walker Art Gallery in Liverpool will be the starting point to consider the interrelationship of materiality, technology, and timeliness or contemporaneity. The Walker Shepherd was a major component in Oliver Laric's project for the 2016 Liverpool Biennial. The data from his scans of objects in the Walker's collection were made available on the internet for anyone to have printed or to reimagine; he also printed a scale version of the *Sleeping Shepherd* with multiple plastic finishes, in different scales to display.

This paper draws out parallels between Laric's technological interventions and the neoclassical practice of refiguring antique sculpture. Despite the difference in materiality and technological production methods, three-dimensionally printed copies of historic works, even with artistic interventions, are the intellectual descendants of neoclassical artists. Laric's *Sleeping Shepherd* responds, in new technologies and media, to Gibson's work, just as Gibson's work responded to that of Canova, Thorvaldsen, and the antique. At the same time, its explicit position as 'contemporary' art in the Biennial might be seen to contradict the sleeping shepherd's supposed timelessness as a subject – or, given that Gibson's original sculpture was once contemporary art that reworked a historic precedent, does it simply add a new data point to this set that can be printed and reworked at any time?